

Application No.: 10/612,804
Amendment dated: April 11, 2005
Reply to Office Action dated: January 11, 2005

AMENDMENTS TO THE CLAIMS

1-2 (Cancelled)

3. (Original) A method, comprising:

forming a conductive bump on one of a die and a substrate;

forming a non-conductive pocket on the other of said die and substrate; and

contacting the bump with the non-conductive pocket; and

curing the bump and the non-conductive pocket to form a covalently bonded laminate structure.

4. (Original) The method of claim 3, wherein said step of forming the conductive bump includes forming the bump using a polymer.

5-17 (Cancelled)

18. (Original) A method for making a flip chip apparatus, comprising:

forming a plurality of electrically conductive polymer bumps on one of a die and a substrate;

forming an electrically non-conductive film around each of a plurality of contact pads on other of said die and substrate;

partially curing the bumps and the film; and

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contacting the bumps with the contact pads, and curing the bumps and the non-conductive film to form a covalently bonded laminate structure.

19. (Original) The method of claim 18 wherein the bumps and the film being formed from materials allowing control of the degree of latency of the bumps.

20. (Original) The method of claim 18, wherein the materials include benzocyclobutene.

21. (Original) The method of claim 18, wherein the covalently bonded structure being formed of materials having equivalent coefficients of thermal expansion.

22. (Original) The method of claim 18, wherein said step of forming the polymer bumps includes forming the bumps using one of spin coating and stencil printing.

23. (Original) An electrically conductive paste, comprising:

benzocyclobutene; and

filler particles dispersed in the benzocyclobutene.

24. (Original) The electrically conductive paste of claim 23, wherein the particles are one of spherical particles and irregularly shaped particles.

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25. (Original) A method for forming an electrically conductive paste, comprising:
forming benzocyclobutene; and
dispersing filler particles within the benzocyclobutene.
26. (Original) The method of claim 25, further comprising:
forming a bump using the benzocyclobutene dispersed with filler particles on one of a die
and substrate.
27. (Original) The method of claim 25, wherein said step of forming the bump includes
forming the bump by one of stencil printing and spin-coating.

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AMENDMENTS TO THE DRAWINGS

The attached sheets of drawings include changes to Figure 1. Figure 1 has been designated and identified as Prior Art to comply with the Examiner's request.

The thirteen (13) pages of Replacement drawings are to replace the originally submitted drawings which accompanied the subject patent application at the time of filing are attached following page 7 of this paper.

Attachment: Annotated Sheets Showing Changes
Replacement Sheets